



11-22-04

1634

Express Mail No.: EV 456 932 851 US

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: THOMAS *et al.* Confirmation No. 8113
Serial No. 09/497,957 Art Unit: 1634
Filed: February 4, 2000 Examiner: Goldberg, Jeanine Anne
For: PLASMIDS COMPRISING NUCLEIC Attorney Docket No. 8907-087-999
ACIDS FROM THE HEREDITARY
HEMOCHROMATOSIS GENE

TRANSMITTAL

Commissioner for Patents
Mail Stop Post Issue
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith are the following documents in connection with the above-identified application:

- 1) Revocation and Power of Attorney or Authorization of Agent;
- 2) Copy of Official Filing Receipt of the above-identified application;
- 3) Copies of the following recorded assignments:
 - a. From the inventors to Mercator Genetics, Inc.
 - b. From Mercator Genetics, Inc. to Progenitor, Inc.
 - c. From Progenitor, Inc. to Bio-Rad Laboratories, Inc.
- 4) Change of Correspondence Address

No fee is believed to be due. The Commissioner is however authorized to charge all required fees, fees under 37 C.F.R. § 1.17 and all required extension of time fees, or credit any overpayment, to Jones Day Deposit Account No. 50-3013 (043018-999087).

Respectfully submitted,

Date: November 18, 2004

Roger C. Rich 54,398
Roger C. Rich (Reg. No.)
For: Nikolaos C. George (Reg. No. 39,201)
JONES DAY
222 East 41st Street
New York, New York 10017
(212) 326-3939



Express Mail No.: EV 456 932 851 US

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: THOMAS *et al.* Confirmation No. 8113
Serial No. 09/497,957 Art Unit: 1634
Filed: February 4, 2000 Examiner: Goldberg, Jeanine Anne
For: PLASMIDS COMPRISING NUCLEIC Attorney Docket No. 8907-087-999
ACIDS FROM THE HEREDITARY
HEMOCHROMATOSIS GENE

CHANGE OF CORRESPONDENCE ADDRESS

Commissioner for Patents
Mail Stop Post Issue
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please change the correspondence address for the above-referenced patent application to reflect the firm name, address, telephone number, and telefax number of Customer Number:

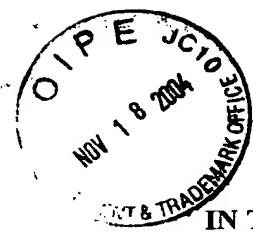
20583

Please note this is the address for receipt of all correspondence from the United States Patent and Trademark Office.

Respectfully submitted,

Date: November 18, 2004


Roger C. Rich 54,398
(Reg. No.)
For: Nikolaos C. George (Reg. No. 39,201)
JONES DAY
222 East 41st Street
New York, New York 10017
(212) 326-3939



Express Mail No. EV 456932851 US

POWER OF ATTORNEY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application THOMAS *et al.* Confirmation No. 8113
of:

Serial No. 09/497,957 Art Unit: 1634

Filed: February 4, 2000 Examiner: Goldberg, Jeanine Anne

For: PLASMIDS COMPRISING NUCLEIC ACIDS Attorney Docket No. 8907-087-999
FROM THE HEREDITARY
HEMOCHROMATOSIS GENE

REVOCATION AND POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Bio-Rad Laboratories, Inc., Assignee, hereby revokes any and all previous powers and appoints:

Practitioners at Customer Number 20583

as its attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please direct all correspondence address for the above-identified application to:

The above mentioned Customer Number.

Firm or Individual Name:

Address: Jones Day, 222 East 41st Street, New York, New York 10017

Telephone: (212) 326-3939

I am the:

Applicant/Inventor
Assignee of record of the entire interest. See 37 CFR 3.71.
(Statement under 37 CFR 3.73(b) is applicable)

SIGNATURE of Applicant or Assignee of Record			
Date:	8-25-04	Signature:	
		Typed Name:	John J. Cassingham
		Position/Title:	Patent Counsel and Assistant Secretary
		Assignee:	Bio-Rad Laboratories, Inc.

Statement Under 37 C.F.R. 3.73(b)

Bio-Rad Laboratories, Inc., states that it is:

the assignee of the entire right, title, and interest; or
 an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is %

in the patent application/patent identified above by virtue of either:

An assignment from the inventor(s) of the patent application/patent identified above, a copy which is attached hereto.

OR

A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: To:

The document was recorded in the United States Patent and Trademark Office on at Reel , Frame , or for which a copy thereof is attached.

2. From: To:

The document was recorded in the United States Patent and Trademark Office on at Reel , Frame , or for which a copy thereof is attached.

3. From: To:

The document was recorded in the United States Patent and Trademark Office on at Reel , Frame , or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet.

Copies of assignments or other documents in the chain of title are attached.

[Note: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

ASSIGNEE:

Bio-Rad Laboratories, Inc.

Date:

8-25-04

Signature:



Typed Name:

John J. Cassingham

Position/Title:

Patent Counsel and Assistant Secretary

Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required.

Total of 1 form is submitted.



FILING RECEIPT



OC00000005026198

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark OfficeAddress: ASSISTANT SECRETARY AND
COMMISSIONER OF PATENT AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/497,957 ✓✓	02/04/2000 ✓✓	1644	690	8907-087-999 ✓	13	1	1

09/497,957 ✓✓ 02/04/2000 ✓✓ 1644 690 8907-087-999 ✓ 13 1 1

D15-514/00

20583
 PENNIE AND EDMONDS
 1155 AVENUE OF THE AMERICAS
 NEW YORK, NY 100362711

Date Mailed: 04/03/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Winston J. Thomas, San Mateo, CA ;
 Dennis T. Drayna, Bethesda, MD ;
 John N. Feder, Mountain View, CA ;
 Andreas Gnrke, San Carlos, CA ;
 David Ruddy, San Francisco, CA ;
 Zenta Tsuchihashi, Menlo Park, CA ;
 Roger K. Wolff, Mill Valley, CA ;

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APR 07 2000

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CA OFFICE

Continuing Data as Claimed by Applicant

THIS APPLICATION IS A CON OF 08/834,497 04/04/1997
 WHICH IS A CIP OF 08/630,912 04/04/1996 ABN
 AND A CIP OF 08/632,673 04/16/1996 PAT 5,712,098
 AND A CIP OF 08/652,265 05/23/1996 PAT 6,025,130

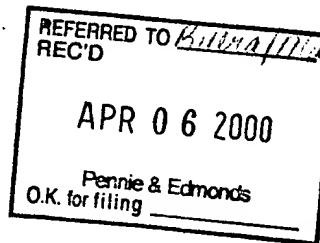
Foreign Applications

If Required, Foreign Filing License Granted 04/03/2000

**

Title

Hereditary Chromatosis Gene ✓✓



Preliminary Class

Data entry by : ROBINSON, YOLANDA

Team : OIPE

Date: 04/03/2000



**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 36 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (i)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."

Any corrections that may need to be done to your Filing Receipt should be directed to:



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MAY 08, 2000

PTAS



101287450A

CA

PENNIE & EDMONDS LLP
BRIAN M. POISSANT
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/04/2000

REEL/FRAME: 010598/0014
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
PROGENITOR, INC.

DOC DATE: 03/24/1999

ASSIGNEE:
BIO-RAD LABORATORIES, INC.
1000 ALFRED NOBEL DRIVE
HERCULES, CALIFORNIA 94547

✓ SERIAL NUMBER: 09497957 8907-04
PATENT NUMBER:

✓ SERIAL NUMBER: 08436074 8907-04
PATENT NUMBER: 5753438

✓ SERIAL NUMBER: 08599252 8907-04
PATENT NUMBER: 5705343

✓ SERIAL NUMBER: 08632673 8909-05
PATENT NUMBER: 5712098

FILING DATE: 02/04/2000
ISSUE DATE:

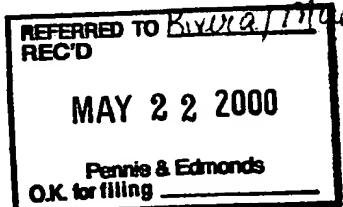
FILING DATE: 05/08/1995
ISSUE DATE: 05/19/1998

FILING DATE: 02/09/1996
ISSUE DATE: 01/06/1998

FILING DATE: 04/16/1996
ISSUE DATE: 01/27/1998

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MAY 24 2000
NAM - 277
CA OFFICE



010598/0014 PAGE 2

SERIAL NUMBER: 08652265 8907-053
PATENT NUMBER: 6025130

FILING DATE: 05/23/1996 ✓
ISSUE DATE: 02/15/2000

SERIAL NUMBER: 08724394 8907-054
PATENT NUMBER: 5872237

FILING DATE: 10/01/1996 ✓
ISSUE DATE: 02/16/1999

SERIAL NUMBER: 08834497 8907-056
PATENT NUMBER:

FILING DATE: 04/04/1997 ✓
ISSUE DATE:

SERIAL NUMBER: 08852495 8907-057
PATENT NUMBER:

FILING DATE: 05/07/1997 ✓
ISSUE DATE:

SERIAL NUMBER: 08867010 8907-058
PATENT NUMBER: 5/16 08/876.010

FILING DATE: 06/02/1997 ✓
ISSUE DATE:

SERIAL NUMBER: 08920559 8907-062
PATENT NUMBER:

FILING DATE: 08/27/1997 ✓
ISSUE DATE:

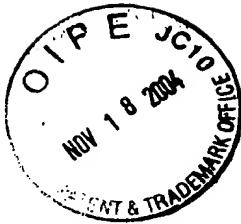
SERIAL NUMBER: 09094964 8907-074
PATENT NUMBER:

FILING DATE: 06/12/1998 ✓
ISSUE DATE:

SERIAL NUMBER: 09216077 8907-076
PATENT NUMBER:

FILING DATE: 12/18/1998 ✓
ISSUE DATE:

SHARON LATIMER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
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Washington, D.C. 20231



101287450B

AUTHORIZATION TO CHARGE ADDITIONAL FEES TO DEPOSIT ACCOUNT

MAY 08, 2000

TO: OFFICE OF FINANCE
FROM: ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS
SUBJECT: DEPOSIT ACCOUNT CHARGE(S)

CHARGE THE DEPOSIT ACCOUNT LISTED BELOW ADDITIONAL FEE(S) AS INDICATED BELOW. AUTHORIZATION TO CHARGE ADDITIONAL FEES HAS BEEN PROVIDED PER THE ATTACHED COVER SHEET, OR BY DIRECT CONTACT WITH THE CUSTOMER.

DEPOSIT ACCOUNT NUMBER: 116115
PROPERTY NUMBER: 09497957

RECORDING FEES:

FEE CODE: 581 AMOUNT: 40

IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, YOU MAY CONTACT THE INDIVIDUAL WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.

SHARON LATIMER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

TRADEMARK SERVICE FEES: FEE CODE:

RECORDING FIRST MARK	481
RECORDATION SECOND AND	482
SUBSEQUENT MARK IN SAME DOCUMENT	
LABOR CHARGES FOR SERVICES PER HOURS	484
OR FRACTION THEREOF	
UNSPECIFIED OTHER SERVICES	485

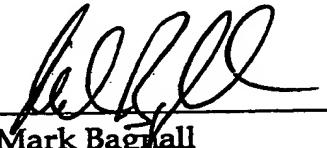
PATENT SERVICE FEES:

RECORDING EACH PATENT ASSIGNMENT, 581

successors and assigns, to obtain and enforce proper patent protection for the invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by BIO-RAD, its successors and assigns.

IN WITNESS WHEREOF, each party has caused its authorized representative to execute this Assignment.

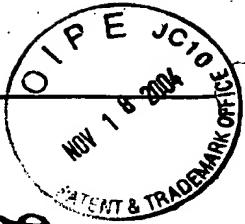
PROGENITOR, INC.

By: 

Name: Mark Bagwell

Title: Vice President and Chief Financial Officer

Date: 3/24/99



03-14-2000



24-00

101287450

Express Mail No. EL 236 253 072 US

ET

Attorney Docket Numbers

: 8907-049-999; 8907-052-999; 8907-053-999;
: 8907-056-999; 8907-057-999; 8907-059-999;
8907-062-999; 8907-074-999; 8907-076-999

TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS

Box Assignment
Washington, DC 20231U.S. PRO
101287450
JC675/09/97957
02/02/01

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Progenitor, Inc.

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

 Assignment Merger Security Agreement Change of Name Other _____

Execution Date: March 24, 1999

2. Name and address of receiving party(ies):

Name: Bio-Rad Laboratories, Inc.

Address: 1000 Alfred Nobel Drive
Hercules, CA 94547

Country (if other than USA): _____

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

B. Patent No.(s) _____

08/436,074 (now US 5,753,438); 08/599,252 (now US 5,705,343); 08/632,673 (now US 5,712,098); 08/652,265; 08/724,394 (now US 5,872,237); 08/834,497; 08/852,495; 08/867,010; 08/920,559; 09/094,964; 09/216,077

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, NY 10036

6. Number of applications and patents involved: 11

7. Total fee (37 CFR 3.41): \$ 440.00
Please charge to the deposit account listed in Section 8.8. Deposit account number:
16-1150

/09/2000 DNGUYEN 00000143 161150 09497957

FC:581

40.00 CH

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian M. Poissant 28,462
Name of Person Signing Reg. No.

Signature

Brian M. Poissant
By Brian Poissant 4267

Date

Jan. 6, 2000

Total number of pages including cover sheet:

5

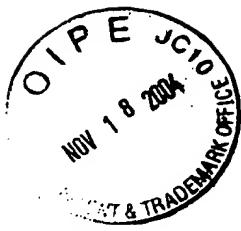
ASSIGNMENT

WHEREAS, Progenitor, Inc., a Delaware corporation having offices at 4040 Campbell Avenue, Menlo Park, California 94025 ("PROGENITOR"), owns, by assignment, all right, title, and interest in those patents and patent applications set forth on Exhibit A hereto and all inventions claimed therein (the "PROGENITOR PATENTS"); and Bio-Rad Laboratories, Inc., a Delaware corporation having offices at Corporate Offices, 1000 Alfred Nobel Drive, Hercules, California 94547 ("BIO-RAD"), desires to acquire PROGENITOR's entire right, title, and interest in and to the PROGENITOR PATENTS.

NOW THEREFORE, be it known that, in consideration of one dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, PROGENITOR hereby sells, assigns, transfers, and sets over to BIO-RAD, its lawful successors and assigns, PROGENITOR's entire right, title, and interest in and to the PROGENITOR PATENTS and all inventions disclosed therein, and all letters patent of the United States that may be granted thereon, and all reissues, reexaminations, and extensions thereof; and all rights to claim priority on the basis of all such patents and patent applications, and all applications for letters patent claiming priority from the PROGENITOR PATENTS that have been or may be filed in any foreign country and all such letters patent that may be granted thereon in any foreign country, and all extensions, renewals, and reissues thereof; and PROGENITOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all letters patent for this invention to BIO-RAD, its successors and assigns, in accordance with the terms of this Assignment;

AND, PROGENITOR HEREBY further covenants that PROGENITOR has the full right to convey the interest assigned by this Assignment, PROGENITOR will take all action and execute all documents necessary to perfect the interest assigned hereby, and PROGENITOR has not executed and will not execute any agreement in conflict with this Assignment;

AND, PROGENITOR HEREBY further covenants and agrees that PROGENITOR, through its officers and employees, will, without further consideration, communicate with BIO-RAD, its successors and assigns, any facts known to PROGENITOR and its officers and employees respecting the invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to the invention in said BIO-RAD, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths, and generally do everything possible to aid BIO-RAD, its



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MARCH 31, 2000

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PENNIE & EDMONDS LLP
BRIAN M. POISSANT
1155 AVENUE OF THE AMERICAS
NY, NY 10036



101247536A

UNITED STATES PATENT AND TRADEMARK OFFICE
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/06/2000

REEL/FRAME: 010489/0178
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
PROGENITOR, INC.

DOC DATE: 03/24/1999

ASSIGNEE:
BIO-RAD LABORATORIES, INC.
1000 ALFRED NOBEL DRIVE
HERCULES, CALIFORNIA 94547

SERIAL NUMBER: 08436074 8407-046
PATENT NUMBER: 5753438 ✓

FILING DATE: 05/08/1995
ISSUE DATE: 05/19/1998

SERIAL NUMBER: 08599252 8407-049
PATENT NUMBER: 5705343 ✓

FILING DATE: 02/09/1996
ISSUE DATE: 01/06/1998

SERIAL NUMBER: 08632673 8407-052
PATENT NUMBER: 5712098 ✓

FILING DATE: 04/16/1996
ISSUE DATE: 01/27/1998

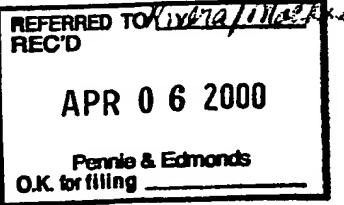
SERIAL NUMBER: 08652265 8407-053 ?
PATENT NUMBER: 6025130 ✓

FILING DATE: 05/23/1996
ISSUE DATE: 02/15/2000

RECEIVED
PENNIE & EDMONDS

APR 07 2000

CA OFFICE



010489/0178 PAGE 2

SERIAL NUMBER: 08724394-8907-054491
PATENT NUMBER: 58722371

SERIAL NUMBER: 08834497 8907-056990
PATENT NUMBER:

SERIAL NUMBER: 08852495 8907-057990
PATENT NUMBER:

SERIAL NUMBER: 08867010 8907-054999
PATENT NUMBER:

SERIAL NUMBER: 08920559 8907-062999?
PATENT NUMBER:

SERIAL NUMBER: 09094964 8907-071499
PATENT NUMBER:

SERIAL NUMBER: 09216074 8907-076999?
PATENT NUMBER:

FILING DATE: 10/01/1996
ISSUE DATE: 02/16/1999

FILING DATE: 04/04/1997
ISSUE DATE:

FILING DATE: 05/07/1997
ISSUE DATE:

FILING DATE: 06/02/1997
ISSUE DATE:

FILING DATE: 08/27/1997
ISSUE DATE:

FILING DATE: 06/12/1998
ISSUE DATE:

FILING DATE: 12/18/1998
ISSUE DATE:

KIMBERLY WHITE, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

MAIL DATE CA
JAN 10 2000
PATENT & TRADEMARK OFFICE

101247500
1/16/00

Attorney Docket Numbers

8907-046-999; 8907-049-999; 8907-052-999; 8907-053-999;
8907-054-999; 8907-056-999; 8907-057-999; 8907-059-999;
8907-062-999; 8907-074-999; 8907-076-999

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NOV 18 2004
PATENT & TRADEMARK
OFFICE

TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS

Box Assignment
Washington, DC 20231

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Progenitor, Inc.

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

Assignment Merger

Security Agreement Change of Name

Other _____

EP

Execution Date: March 24, 1999

2. Name and address of receiving party(ies):

Name: Bio-Rad Laboratories, Inc.

Address: 1000 Alfred Nobel Drive
Hercules, CA 94547

Country (if other than USA): _____

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

B. Patent No.(s) _____

08/436,074 (now US 5,753,438); 08/599,252 (now US 5,705,343); 08/632,673 (now US 5,712,098); 08/652,265; 08/724,394 (now US 5,872,237); 08/834,497; 08/852,495; 08/867,010; 08/920,559; 09/094,964; 09/216,077

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, NY 10036

6. Number of applications and patents involved: 11

7. Total fee (37 CFR 3.41): \$ 440.00
Please charge to the deposit account listed in Section 8.

8. Deposit account number:
16-1150

/10/2000 DNGUYEN 00000103 161150 08436074

FD:581

440.00 CH

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian M. Poissant

28,462

Name of Person Signing

Reg. No.

Brian M. Poissant

Signature

By *Brian M. Poissant* 42067

Jan. 6, 2006

Date

Total number of pages including cover sheet: 5

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignment
Washington, D.C. 20231

ASSIGNMENT

WHEREAS, Progenitor, Inc., a Delaware corporation having offices at 4040 Campbell Avenue, Menlo Park, California 94025 ("PROGENITOR"), owns, by assignment, all right, title, and interest in those patents and patent applications set forth on Exhibit A hereto and all inventions claimed therein (the "PROGENITOR PATENTS"); and Bio-Rad Laboratories, Inc., a Delaware corporation having offices at Corporate Offices, 1000 Alfred Nobel Drive, Hercules, California 94547 ("BIO-RAD"), desires to acquire PROGENITOR's entire right, title, and interest in and to the PROGENITOR PATENTS.

NOW THEREFORE, be it known that, in consideration of one dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, PROGENITOR hereby sells, assigns, transfers, and sets over to BIO-RAD, its lawful successors and assigns, PROGENITOR's entire right, title, and interest in and to the PROGENITOR PATENTS and all inventions disclosed therein, and all letters patent of the United States that may be granted thereon, and all reissues, reexaminations, and extensions thereof; and all rights to claim priority on the basis of all such patents and patent applications, and all applications for letters patent claiming priority from the PROGENITOR PATENTS that have been or may be filed in any foreign country and all such letters patent that may be granted thereon in any foreign country, and all extensions, renewals, and reissues thereof; and PROGENITOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all letters patent for this invention to BIO-RAD, its successors and assigns, in accordance with the terms of this Assignment;

AND, PROGENITOR HEREBY further covenants that PROGENITOR has the full right to convey the interest assigned by this Assignment, PROGENITOR will take all action and execute all documents necessary to perfect the interest assigned hereby, and PROGENITOR has not executed and will not execute any agreement in conflict with this Assignment;

AND, PROGENITOR HEREBY further covenants and agrees that PROGENITOR, through its officers and employees, will, without further consideration, communicate with BIO-RAD, its successors and assigns, any facts known to PROGENITOR and its officers and employees respecting the invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to the invention in said BIO-RAD, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths, and generally do everything possible to aid BIO-RAD, its

successors and assigns, to obtain and enforce proper patent protection for the invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by BIO-RAD, its successors and assigns.

IN WITNESS WHEREOF, each party has caused its authorized representative to execute this Assignment.

PROGENITOR, INC.

By: 

Name: Mark Bagnall

Title: Vice President and Chief Financial Officer

Date: 3/24/99

TO
ASSIGNMENT
BETWEEN PROGENITOR, INC. AND BIO-RAD LABORATORIES, INC.

I. U.S. PATENTS AND PATENT APPLICATIONS

<u>Inventor</u>	<u>Serial No.</u>	<u>Filed</u>	<u>Title</u>
Drayna et al.	08/436,074	05/08/95	Method to Diagnose Hereditary Hemochromatosis
Drayna et al.	08/599,252	02/09/96	Method to Diagnose Hereditary Hemochromatosis
Tsuchihashi et al.	08/632,673	04/16/96	Hereditary Hemochromatosis Diagnostic Markers and Diagnostic Methods
mas et al.	08/652,265	05/23/96	Hereditary Hemochromatosis Gene
Feder et al.	08/724,394	10/01/96	Megabase Transcript Map: Novel Sequences and Antibodies Thereto
Thomas et al.	08/834,497	04/04/97	Hereditary Hemochromatosis Gene
Ruddy and Wolff	08/852,495	05/07/97	Polymorphisms in the Region of the Human Hemochromatosis Gene
Feder et al.	08/867,040	06/13/97	Methods and Compositions for Diagnosis and Treatment of Iron Overload Diseases
Feder et al.	08/920,559	08/27/97	Methods and Compositions for Diagnosis and Treatment of Iron Misregulation Diseases
Feder et al.	09/094,964	06/12/98	Methods and Compositions for Diagnosis and Treatment of Iron Overload Diseases and Iron Deficiency Diseases
Feder et al.	09/216,077	12/18/98	Peptides and Peptide Analogues Designed from HFE Protein and Their Uses in the Treatment of Iron Overload Disease

*D. J. Jinn
DOUGLASS GIVEN
PRESS, DENT
PROSPECTOR, INC.*
S/31/00

II. FOREIGN PATENTS AND PATENT APPLICATIONS

<u>Country</u>	<u>Application No.</u>	<u>Filed</u>
Canada	2,220,293	05/08/96
Australia	58559/96	05/08/96
South Africa	96/3639	05/08/96
EPO	96920167.2	05/08/96
T	PCT/US96/06583	05/08/95
South Africa	97/6370	03/19/97
South Africa	97/8804	10/01/97
PCT	PCT/US97/17658	09/30/97
Canada		04/04/97
Australia	26701/97	04/04/97
EPO	97918642.6	04/04/97
T	PCT/US97/06254	04/04/97
PCT	PCT/US98/12436	06/12/98

REFERRED
REC'D

MAY 19 1999

Pennie & Edmonds

O.K. for filing



MAY 04, 1999

PTAS

PENNIE & EDMONDS LLP
BRIAN M. POISSANT
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231



100961523A

89-7-056



UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/29/1999

REEL/FRAME: 9739/0182
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MERCATOR GENETICS, INC.

DOC DATE: 01/27/1999

ASSIGNEE:

PROGENITOR, INC.
4040 CAMPBELL AVENUE
MENLO PARK, CALIFORNIA 94025

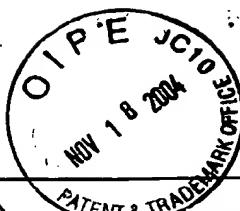
SERIAL NUMBER: 08834497

FILING DATE: 04/04/1997
ISSUE DATE:

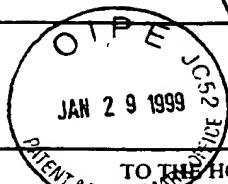
PATENT NUMBER:

MARY BENTON, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

1009
NPS - 221



Express Mail No. EL 236 251 669 US



RECORDATION FORM COVER SHEET
PATENTS & TRADEMARK OFFICE
D A T E N T S O N I V
02-08-1999

Attorney Docket Number
8907-056-999

TO THE HONORABLE



TRADEMARKS

MLD 1-29-99

100961523

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Mercator Genetics, Inc.

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

Assignment Merger
 Security Agreement Change of Name
 Other _____

Execution Date: January 27, 1999

2. Name and address of receiving party(ies):

Name: Progenitor, Inc.

Address: 4040 Campbell Avenue
Menlo Park, CA 94025

Country (if other than USA): _____

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s) 08/834,497

B. Patent No.(s) _____

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, NY 10036

6. Number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00
Please charge to the deposit account listed in Section 8.

8. Deposit account number:
16-1150

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian M. Poissant, Reg. No. 28,462

Name of Person Signing Reg. No.

*Brian M. Poissant / by Victoria Lee
Reg. No. 35,750*

January 29, 1999

Date

Total number of pages including cover sheet:

2

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignment
Washington, D.C. 20231

ASSIGNMENT

WHEREAS, Mercator Genetics, Inc., ASSIGNOR, a corporation organized and existing under the laws of California, U.S.A., and having a place of business at 4040 Campbell Avenue, Menlo Park, CA 94025, is the owner of the entire right, title and interest in, and to, application for United States Letters Patent, in the names of Winston J. Thomas, Dennis T. Drayna, John N. Feder, Andreas Gnarke, David Ruddy, Zenta Tsuchihashi and Roger K. Wolff for *Hereditary Hemochromatosis Gene* and of the invention therein described; and

- ☒ which is identified by Pennie & Edmonds LLP docket no. 8907-0056-999
- ☒ which was filed on April 4, 1997 as Application No. 08/834,497

and WHEREAS, Progenitor, Inc., ASSIGNEE, a corporation organized and existing under the laws of Delaware, U.S.A., and having a place of business at 4040 Campbell Avenue, Menlo Park, CA 94025, is desirous of obtaining the entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said ASSIGNOR, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND I HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND I HEREBY covenant and agree that I have full right to convey the entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 27 day of January, 1999.

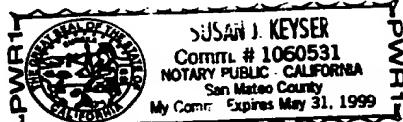
Mercator Genetics, Inc.

L.S.

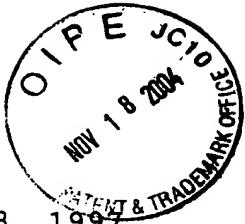
By: Douglass B. Given, President

State of California)
) SS.:
County of Santa Clara

On this 27th day of January, 1999, before me, a Notary Public in and for the State and County aforesaid, personally appeared Douglass B. Given, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.



Susan J. Keyser
Notary Public.



NOVEMBER 18, 1997

PTAS
TOWNSEND AND TOWNSEND AND CREW LLP
RENEE A. FITTS
TWO EMBARCADERO CENTER
SAN FRANCISCO, CA 94111-3834

7957-000520US
UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231



100553923A

RAK

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/06/1997

REEL/FRAME: 8741/0741
NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

THOMAS, WINSTON J.

DOC DATE: 04/16/1997

ASSIGNOR:

DRAYNA, DENNIS T.

DOC DATE: 04/24/1997

ASSIGNOR:

FEDER, JOHN N.

DOC DATE: 04/16/1997

ASSIGNOR:

GNIRKE, ANDREAS

DOC DATE: 04/16/1997

ASSIGNOR:

RUDDY, DAVID

DOC DATE: 04/16/1997

ASSIGNOR:

TSUCHIHASHI, ZENTA

DOC DATE: 04/16/1997

ASSIGNOR:

WOLFF, ROGER K.

DOC DATE: 04/16/1997

RECEIVED
97 NOV 24 AM 9:58

RECORDED IN THE
U.S. PATENT AND TRADEMARK
OFFICE

8741/0741 PAGE 2

ASSIGNEE:

MERCATOR GENETICS, INC.
4040 CAMPBELL AVENUE
MENLO PARK, CALIFORNIA 94025

SERIAL NUMBER: 08834497
PATENT NUMBER:

FILING DATE: 04/04/1997
ISSUE DATE:

PEARLENE FOSTER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

MRD 10-6-97

10-17-1997

FORM PTO-1595
(Rev. 6-93)

Attorney Docket No. 17957-000520

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

100553923

To the Honorable Asst. Commissioner for Patents. Please record the attached original documents or copy them. 06 1997

1. Name of conveying party(ies):

Winston J. Thomas

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

<input checked="" type="checkbox"/> Assignment	<input type="checkbox"/> Merger
<input type="checkbox"/> Security Agreement	<input type="checkbox"/> Change of Name
<input type="checkbox"/> Other:	

Execution Date: April 16, 1997 & April 24, 1997

2. Name and address of receiving party(ies):

Name: Mercator Genetics, Inc.

RECEIPT ACCOUNTING DIV

Internal Address:

Street Address: 4040 Campbell Avenue

City: Menlo Park State: CA ZIP: 94025

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s).

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s) 08/834,497

B. Patent No.(s)

Additional numbers attached?

 Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Renee A. Fitts
 TOWNSEND and TOWNSEND and CREW LLP
 Two Embarcadero Center, 8th Floor
 San Francisco, California 94111-3834
 (650) 326-2400

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

<input type="checkbox"/> Enclosed	<input checked="" type="checkbox"/> Charge Fees to Deposit Account
<input checked="" type="checkbox"/> Charge any additional fees associated with this paper or during the pendency of this application, or credit any overpayment, to deposit account	

8. Deposit account number: 20-1430

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Renee A. Fitts

Name of Person Signing

Signature

10/03/97

Date

Atty. Reg. No. 35,136

Total number of pages including cover sheet, attachments, and document: 6

10. Change Correspondence Address to that of Part 5? Yes No

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:

Do not detach this portion
 Asst. Commissioner for Patents
 Box Assignments
 Washington, D.C. 20231

1. Additional name(s) of conveying party(ies):
(Continued from Page 1)

Dennis T. Drayna
John N. Feder
Andreas Gniuke
David Ruddy
Zenta Tsuchihashi
Roger K. Wolff

2. Additional name(s) and address(es) of receiving party(ies):
(Continued from Page 1)

4. Additional application number(s) or patent number(s):
(Continued from Page 1)

A. Patent Application No.(s)

B. Patent No.(s)

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Winston J. Thomas of 40 White Plains Ct., San Mateo, CA 94402, Dennis T. Drayna of 120 Center Drive #409, Bethesda, MD 20814, John N. Feder of 411 B West Dana Street, Mountain View, CA 94041, Andreas Gnarke of 1220 Highland Court, San Carlos, CA 94070, David Ruddy of 2336 B Gough Street, San Francisco, CA 94109, Zenta Tsuchihashi of 9 Light Way, Menlo Park, CA 94025, and Roger K. Wolff of 41 Eugene Street, Mill Valley, CA 94941, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below identified application for United States Letters Patent:

Title of the Invention: **HEREDITARY HEMOCHROMATOSIS GENE**

Filing date: April 4, 1997 Application No.: Unknown; and

WHEREAS, Mercator Genetics, Inc. a California corporation, located at 4040 Campbell Avenue, Menlo Park, CA 94025, hereinafter referred to as "Assignee," is desirous of acquiring an interest in the invention and application and in any Letters Patent and Registrations which may be granted on the same;

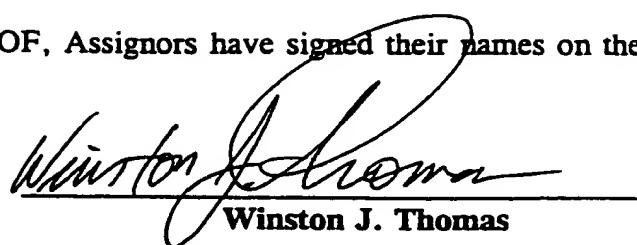
For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements

in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

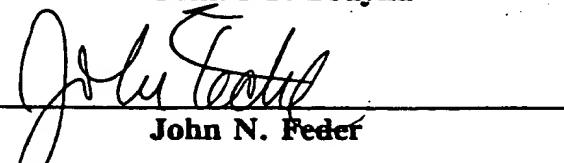
Date: 4/16/97


Winston J. Thomas

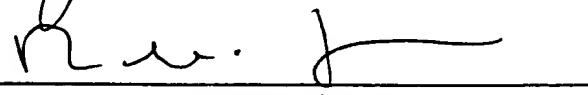
Date: _____

Dennis T. Drayna

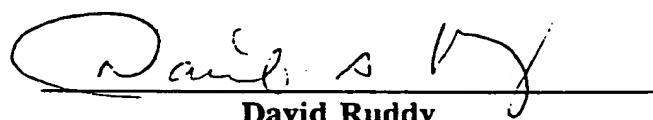
Date: 4/16/97


John N. Feder

Date: 4-16-97


Andreas Gnierke

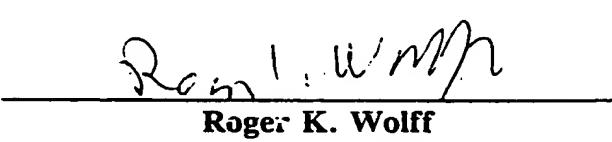
Date: 4-16-97


David Ruddy

Date: 3/16/97


Zenta Tsuchihashi

Date: 4/16/97


Roger K. Wolff

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Winston J. Thomas of 40 White Plains Ct., San Mateo, CA 94402, Dennis T. Drayna of 120 Center Drive #409, Bethesda, MD 20814, John N. Feder of 411 B West Dana Street, Mountain View, CA 94041, Andreas Gnierke of 1220 Highland Court, San Carlos, CA 94070, David Ruddy of 2336 B Gough Street, San Francisco, CA 94109, Zenta Tsuchihashi of 9 Light Way, Menlo Park, CA 94025, and Roger K. Wolff of 41 Eugene Street, Mill Valley, CA 94941, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below identified application for United States Letters Patent:

Title of the Invention: **HEREDITARY HEMOCHROMATOSIS GENE**

Filing date: April 4, 1997 Application No.: Unknown; and

WHEREAS, Mercator Genetics, Inc. a California corporation, located at 4040 Campbell Avenue, Menlo Park, CA 94025, hereinafter referred to as "Assignee," is desirous of acquiring an interest in the invention and application and in any Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements

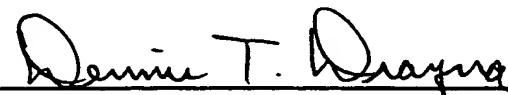
in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Date: _____

Winston J. Thomas

Date: 4/24/97


Dennis T. Drayna

Dennis T. Drayna

Date: _____

John N. Feder

Date: _____

Andreas Gnírke

Date: _____

David Ruddy

Date: _____

Zenta Tsuchihashi

Date: _____

Roger K. Wolff

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